

REMARKS

Reconsideration of the present application is respectfully requested. Claims 1-19, 28 and 29 previously presented for examination remain in the application. Claims 20-27 have been withdrawn in a previous amendment as being directed to a non-elected invention. Claims 1, 7, 9, 14 and 28-29 have been amended and claim 11 has been canceled. No new claims have been added.

Claim 9 stands objected to due to informalities. Claim 9 has been amended as indicated above to correct typographical errors.

Claims 28 and 29 stand rejected under 35 U.S.C. § 101 as being considered to be directed to non-statutory subject matter. Claims 28 and 29 have been amended to clarify that they are directed to tangible machine accessible media, and, therefore, meet the requirements of 35 U.S.C. § 101.

Claims 1, 2, 7, 8, 10, 11, 14-18, 28 and 29 stand rejected under 35 U.S.C. § 102(b) as being considered to be anticipated by U.S. Patent No. 6,317,834 to Rosario Gennaro et al. ("Gennaro").

Claim 1 includes the limitations

- at least a first input mechanism to receive first multi-factor authentication data associated with Z authentication factors of Z types;
- a cryptographic engine to encrypt the first multi-factor authentication data;
- a separated user authentication, non-volatile data store to store the encrypted first multi-factor authentication data; and
- a first processing unit to determine whether second authentication data received via the at least first input mechanism matches a subset of the first multi-factor authentication data, the second authentication data associated with N authentication factors of N types where N is less than or equal to Z, a user being

authenticated if the second authentication data matches the subset of the first authentication data.

(Claim 1)(Emphasis added).

Applicants respectfully submit that Gennaro fails to teach a multi-factor authentication approach as set forth in claim 1, where N types of authentication data are compared vs. Z types of previously stored authentication data (where Z is larger than N) to determine whether a user is authenticated.

Gennaro discloses a biometric authentication with encrypted models. According to Gennaro, a method of performing biometric authentication of a person's identity includes encrypting a biometric template using a pass-phrase, known only to the individual, to generate a cryptographic key used to store and retrieve the biometric template. When an individual wishes to access a secured resource, he must be authenticated by providing an identifier which is used to retrieve the appropriate record. He must also provide the correct password to allow the system to decrypt the model.

Gennaro does not teach or suggest, however, storing Z different types of authentication data and then using N types of data to authenticate a user, where N is less than Z .

By using the claimed approach, if one of the authentication data inputs or data types becomes unavailable for any reason (e.g. failure of a mechanism, etc.), then a user can still be authenticated using a subset of previously collected authentication data.

For at least these reasons, claim 1 is patentably distinguished over Gennaro.

Independent claims 7, 14 and 28 include a similar limitation. Claims 2-6, claims 8-10 and 12-13, claims 15-19 and claim 29 depend from and further limit claims 1, 7, 14 and 28, respectively, and thus, should be found to be patentably distinguished over Gennaro for at least the same reasons.

Claims 4, 6, 12, 13 and 19 stand rejected under 35 U.S.C. § 103(a) as being considered to be unpatentable over Gennaro and further in view of U.S. Patent No. 5,070,479 to Katsuya Nakagawa ("Nakagawa").

Applicants respectfully submit that one of ordinary skill in the art would not have been motivated to combine Nakagawa with Gennaro. Gennaro applies to a biometric authentication approach for a personal computing system while Nakagawa relates to a software authentication approach for a game console. The combination of Gennaro and Nakagawa represents impermissible hindsight.

Were such a combination to be made, however, the combination would still fail to teach or suggest the claimed features of applicant's invention.

As described above, claims 4, 6, 12, 13 and 19 depend either directly or indirectly from one of claims 1, 7, 14 and 28, and are patentably distinguished over Gennaro for the reasons provided above.

A combination of Nakagawa with Gennaro does not remedy the deficiencies of Gennaro.

Nakagawa discloses a key and lock approach related to processors and memories.

Nakagawa does not teach or suggest comparing N authentication data types with Z available authentication data types to authenticate a user.

Thus, the combination of Nakagawa and Gennaro would also fail to teach or suggest such a feature.

For at least these reasons, the claims are patentably distinguished over Nakagawa and Gennaro, alone or in combination.

Claims 3, 5 and 9 stand rejected under 35 U.S.C. § 103(a) as being considered to be unpatentable over Gennaro in view of U.S. Patent No. 7,000,829 to Walter Harris et al. ("Harris").

Applicants respectfully submit that one of ordinary skill in the art would not have been motivated to combine Harris with Gennaro. Gennaro applies to a biometric authentication approach for a personal computing system while Harris relates to an encryption key transfer system for an Automated Teller Machine. The combination of Harris and Gennaro represents impermissible hindsight.

Were such a combination to be made, however, the combination would still fail to teach or suggest the claimed features of applicant's invention.

As described above, claims 3, 5 and 9 depend either directly or indirectly from one of claims 1, 7, 14 and 28, and are patentably distinguished over Gennaro for the reasons provided above.

A combination of Harris with Gennaro does not remedy the deficiencies of Gennaro.

Harris does not teach or suggest comparing N authentication data types with Z available authentication data types to authenticate a user.

Thus, the combination of Harris and Gennaro would also fail to teach or suggest such a feature.

For at least these reasons, the claims are patentably distinguished over Harris and Gennaro, alone or in combination.

Based on the foregoing, applicants respectfully submit that the applicable objections and rejections have been overcome, and the pending claims are in condition for allowance.

If there are any charges, please charge Deposit Account No. 50-0221.

Respectfully submitted,

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